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09/299,684	04/26/1999	NINA T. BHATTI	82046531	3580

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HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
3404 E. Harmony Road  
Mail Stop 35  
FORT COLLINS, CO 80528

EXAMINER
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BIAGINI, CHRISTOPHER D

ART UNIT	PAPER NUMBER
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2445

NOTIFICATION DATE	DELIVERY MODE
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10/05/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM  
ipa.mail@hp.com  
laura.m.clark@hp.com

<b>Office Action Summary</b>	<b>Application No.</b> 09/299,684	<b>Applicant(s)</b> BHATTI ET AL.	
	<b>Examiner</b> CHRISTOPHER BIAGINI	<b>Art Unit</b> 2445	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 5) ☒ Claim(s) 1-6,8-12 and 15 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1-6,8-12 and 15 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date <u>9/20/2011</u> .                           |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application  |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                           |

## **DETAILED ACTION**

This Office Action is in response to the Request for Continued Examination (RCE) filed September 13, 2011.

### ***Response to Arguments***

Applicant's arguments, filed September 13, 2011 with respect to the rejections of claims 1-6, 8-12, and 15 under 35 USC 103(a) have been fully considered but are not persuasive.

Applicant argues in substance (see paragraph spanning pp. 7-8), that the combination of Daneels, Engelschall, and Abbott does not teach or suggest "a control and feedback loop configured for self-regulating partial degradation such that a fraction of said request addresses are modified to access said second of said plurality of content files when said content server is in said overload condition." The Examiner respectfully disagrees, and will address the particulars of Applicant's arguments below.

Applicant first argues that Daneels is "silent in regards to a control and feedback loop." The Examiner respectfully disagrees. For example, the functionality of Daneels may be reasonably considered a "loop" because state evaluation occurs repeatedly for each set of state conditions and with each client request (see flow chart elements 106-120 in Fig. 2, and note that, as described at lines 3-5 of col. 5, "The state information database is updated by the state setting device whenever events warrant a change in state"). This loop is reasonably considered a "control" loop because it *controls* which web page is provided to a user (see col. 3, lines 6-36). Finally, the loop may be considered a "feedback" loop because it provides *feedback* to the user

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(see col. 3, lines 34-36, describing providing “a message to the user to try again later”). The combination teaches the balance of the amended claim language for at least the reasons given in the rejection below.

Applicant next argues that Daneels “teaches away” from the claimed control and feedback loop because Daneels is “silent” with respect to the loop and “discloses ONLY allowing the transfer of smaller webpages.” The Examiner respectfully disagrees, and submits that Daneels is not silent with respect to the loop, as provided above, and furthermore does not discourage, discredit, or disparage the solution claimed. For example, Daneels teaching of only allowing certain web pages provides for a “fraction” of the requests in the form of *all* the requests. This is consistent with the use of the term “fraction” in the instant specification (see, e.g., lines 16-17 of p. 25; “The fraction can be between nothing and all of the incoming access requests.”)

For at least the reasons given above, Applicant's arguments cannot be held as persuasive.

### ***Claim Objections***

Claims 1, 2, 9, 10, and 15 are objected to because of the following terms lack proper antecedent basis in their respective claims:

- “the load condition,” “the network,” “the external access request,” and “said access request addresses” as recited in claim 1;
- “the external access request” and “said access request addresses” as recited in claim 9;
- “said content server format” as recited in claim 10.

Claim 2 is objected to because the limitation “said the adaptive load control system” is grammatically incorrect.

Claim 15 is objected to because the limitation “the determining load condition” is grammatically incorrect. The Examiner recommends amending claim 9 to recite "determining a load condition" and amending claim 15 to recite "determining the load condition."

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 1-6 and 8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

Claim 1 is directed to a “data service system” comprising a “content server,” an “adaptive load control system,” a “load monitor,” and a “feedback loop.” Each of these elements may be broadly but reasonably construed as software. For example, the “content server” may be a software server (such as the Apache web server), and its “overload condition” may be a software variable relating to unclaimed hardware. Therefore, given that all of the claimed elements may

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be reasonably construed as software, the claim as a whole may be construed as encompassing software *per se*. Software *per se* is not a process, machine, manufacture, or composition of matter within the meaning of 35 USC 101.

Claims 2-6 and 8, which depend from claim 1, are rejected under the same rationale as given above, because the additionally recited limitations do not exclude embodiments consisting entirely of software.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-6 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

With respect to claim 1, the claim elements “adaptive load control system,” “load monitor,” and “control and feedback loop configured for self-regulating partial degradation” are limitations that invoke 35 U.S.C. 112, sixth paragraph. However, the written description fails to clearly link or associate the disclosed structure, material, or acts to the claimed function such that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function.

The following claim elements suffer from a similar deficiency:

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- “a content adapter” in claim 3, and
- “an adaption controller” in claim 4.

Applicant may:

(a) Amend the claims so that the claim limitations will no longer be interpreted as limitations under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it clearly links or associates the corresponding structures, materials, or acts to the claimed functions without introducing any new matter (35 U.S.C. 132(a)); or

(c) State on the record where the corresponding structures, materials, or acts are set forth in the written description of the specification and linked or associated to the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

The Examiner recommends amending the claims to recite that the various elements are implemented as “software,” thereby providing sufficient structure for performing the claimed functions.

Any claim not specifically addressed above is rejected at least for incorporating the deficiencies of a parent claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-6, 8-12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daneels (US Patent No. 6,038,598) in view of Engelschall ("Apache HTTP Server Version 1.3: Module mod\_rewrite"), and further in view of Abbott et al. (US Patent No. 6,314,463, hereinafter "Abbott").**

Regarding claim 1, Daneels shows a data service system in a data service network system, comprising:

- a content server (comprising the web server in server system 14) that statically stores a plurality of content files for access by external access requests ("web page sets": see col. 2, lines 34-39), wherein a first of said plurality of content files comprises content stored in a full content format (a set containing large amounts of information and video size) and wherein a second of said plurality of content files comprises corresponding content stored in an adapted content format which is less resource-intensive to serve than the full content format (a set containing smaller files such as still images: see col. 3, lines 26-36); and
- an adaptive load control system (the system comprising state setting device 38, state information database 18, and URL-to-file mapping logic 16) coupled to said content server to pass the access requests to said content server (see Fig. 1), wherein the adaptive load control system modifies an access attempt to access said second of said plurality of content files instead of said first of said plurality



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of content files when said content server is in an overload condition such that said content server is maintained at safe load conditions (see col. 2, line 56 to col. 3, line 15 and col. 3, lines 26-36), said adaptive load control system comprising:

- a load monitor (state setting device 38) that monitors the load condition of said content server (see col. 3, lines 19-22 and 26-29); and
- a control and feedback loop (see flow chart elements 106-120 in Fig. 2, and note that, as described at lines 3-5 of col. 5, “The state information database is updated by the state setting device whenever events warrant a change in state”; see also col. 3, lines 6-36, describing “feedback” in the form of a “message to try again later”) configured for self-regulating partial degradation (e.g., where the system regulates its own operation to partially degrade web pages by providing "selected portions" of web pages: see col. 3, lines 26-36) such that a fraction of said access request addresses are modified to access said second of said plurality of content files when said content server is in said overload condition (e.g., all the access requests: see col. 3, lines ).

Daneels further shows that the different content files have different access request addresses (see col. 2, line 58 to col. 3, line 2) and that requests are redirected between those addresses (see col. 3, lines 62-67), but does not explicitly show that the adaptive load control system modifies the access attempt by modifying a URL (Universal Resource Locator) of an access request address. Engelschall shows modifying access request attempts by modifying a URL of an access request address (see Summary on p. 1, discussion of RewriteRule directive on p. 11, and discussion of proxy flag on p. 13). Because both Daneels and Engelschall teach

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methods for modifying access request attempts, it would have been obvious to one of ordinary skill in the art to substitute one method for the other in order to achieve the predictable result of transparently redirecting users to a different URL.

Daneels further does not show that the load monitor establishes the load condition of said content server by measuring an amount of time between when the content server receives the external access request and when said content server provides the external access request.

Abbott shows a load monitor that monitors the load condition of a content server without requiring monitoring of the network, said load monitor establishing the load condition of said content server by measuring an amount of time between when a content server receives the external access request and when said content server provides the external access request (see col. 2, line 54 to col. 3, line 31 and col. 10, line 65 to col. 11, col. 3). It would have been obvious to one of ordinary skill in the art to modify the invention of Mogul with the load monitoring system taught by Abbott in order to measure server response time without the measurement being skewed by varying network performance (see Abbott, col. 1, line 66 to col. 2, line 5).

Regarding claim 2, the combination of Daneels, Engelschall, and Abbott further shows wherein said the adaptive load control system modifies the access request address to access said first of said plurality of content files to access the content in the full content format instead of in the adapted format when said content server is not in the overload condition (comprising a server load of less than 50%: see Daneels, col. 3, lines 6-36).

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Regarding claim 3, the combination of Daneels, Engelschall, and Abbott further shows wherein the adaptive load control system further comprises a content adapter (URL to file mapping logic 16) coupled to said load monitor and said content server to modify the access request address (see Engelschall, p. 13) to access the corresponding said second of said plurality of content files to access content in the adapted content format instead of in the full content format when the load monitor indicates that said content server is in the overload condition (see Daneels, col. 3, lines 26 to 36 and 62-67).

Regarding claim 4, the combination of Daneels, Engelschall, and Abbott further shows wherein said adaptive load control system further comprises an adaption controller coupled to said load monitor and said content adapter to cause said content adapter to modify the access request address (see Engelschall, p. 13) to access said second of said plurality of content files to access content in the adapted content format instead of in the full content format when said load monitor indicates that said content server is in the overload condition (see Daneels, col. 3, lines 26 to 36).

Regarding claim 5, the combination of Daneels, Engelschall, and Abbott further shows wherein said adaption controller determines if said content server is in the overload condition by comparing the load information received by said load monitor against a predetermined desired load value of said content server (the predetermined load value comprising a value of 50%: see Daneels, col. 3, lines 10-12 and 62-67).

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Regarding claim 6, the combination of Daneels, Engelschall, and Abbott further shows wherein said content adapter modifies the access request address to access said first of said plurality of content files to access content in the full content format instead of in the adapted content format when said load monitor indicates that said content server is not in the overload condition (comprising a server load of less than 50%: see Daneels, col. 3, lines 10-12).

Regarding claim 8, the combination of Daneels, Engelschall, and Abbott further shows wherein for each of said plurality of content files, said content server includes a service directory that directs the modified access request address to access said first of said plurality of content files and said second of said plurality of content files (comprising the component which stores associates between page sets and state variables: see Daneels, col. 3, lines 10-12 and col. 4, lines 23-34).

Claim 9 is a method claim corresponding to claim 1 and is rejected for the same reasons as given above.

Regarding claim 10, the combination of Daneels, Engelschall, and Abbott further shows modifying the access request address to access said first of said plurality of content files statically stored in said content server instead of said second of said plurality of content files statically stored in said content server format when said content server is determined not to be in the overload condition (comprising a server load of less than 50%: see Daneels, col. 3, lines 6-

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36).

Regarding claim 11, the combination of Daneels, Engelschall, and Abbott further shows wherein the determining load condition further comprises:

- obtaining the actual load condition of said content server using a load monitor (comprising the state setting device setting a state variable, where server load is a state variable: see Daneels, col. 3, lines 19-22 and col. 4, lines 35-37) ; and
- comparing the actual load condition with a predetermined desired load condition to determine if said content server is in the overload condition (see Daneels, col. 3, lines 62-67).

Regarding claim 12, the combination of Daneels, Engelschall, and Abbott further shows wherein the modifying the access request address is performed by modifying a URL of the access request address (see Engelschall, p. 1).

Regarding claim 15, the combination of Daneels, Engelschall, and Abbott further shows wherein the determining load condition of said content server is performed within said content server (see Daneels, col. 3, lines 26-29).

### ***Conclusion***

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US Patent No. 6,389,462 to Cohen et al. describes transparently redirecting HTTP requests.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER BIAGINI whose telephone number is (571)272-9743. The examiner can normally be reached on weekdays from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher D. Biagini/  
Primary Examiner, Art Unit 2445